



**UNIVERSITY OF RWANDA  
COLLEGE OF ARTS AND SOCIAL SCIENCES  
SCHOOL OF LAW  
LLM IN BUSINESS LAW**

**ADOPTION OF E-PROCUREMENT AND IMPLEMENTATION  
OF BASIC PRINCIPLES OF PUBLIC PROCUREMENT IN  
RWANDA**

**Thesis submitted in partial fulfillment of  
the requirement for the award of a  
master's degree in Business Law (LLM)**

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**Diane ISIMBI UWADEDE**

## **SIGLES ET ABBREVIATIONS**

B2B: Business to Business

BOQs: Bills Of Quantities

EEA: European Economic Area

EC: European Commission

e-GP: Electronic Government Procurement

E-P: Electronic Procurement

EU: European Union

*IBIDEM: Same author, same page*

*IDEM: Same author, different page*

ICT: Information Communication Technology

IT: Information Technology

MINECOFIN: Ministry of Finance and Economic Planning

MININFRA: Ministry of Infrastructures

N°: Number

NTB: National Tender Board

OG: Official Gazette of the Republic of Rwanda

P.: Page

PBNI: Probation Board of Northern Ireland

PEPPOL: Pan-European Public Procurement On-line

PPOA: Public Procurement Oversight Authority

OECD: Organisation for Economic and Co-operation Development

OGRR: Official Gazette of the Republic of Rwanda

*op. cit.: Opera citati*

RPPA: Rwanda Public Procurement Authority

SCM: Supply Chain Management

TED: Tenders Electronic Daily

TOR: Terms Of Reference

XML: Extensible Markup Language

UK: United Kindgdom

UNCITRAL: United Nations Commission on International Trade Law

USA: United States of America

USD: United States Dollar

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS .....	i
SIGLES ET ABREVIATIONS.....	ii
TABLE OF CONTENTS.....	iv
GENERAL INTRODUCTION.....	1
1. Background .....	1
2. Problem statement.....	2
4. Hypothesis.....	3
5. Interest of the subject .....	3
6. Objectives of the research .....	4
7. Research methodology .....	4
8. Delimitation of the subject.....	5
CHAPTER ONE. LITERATURE REVIEW ON PUBLIC PROCUREMENT .....	6
Section one. Procurement .....	6
§1. Historical development of public procurement in Rwanda.....	6
§2. Definitions of procurement and public procurement .....	7
A. Goods .....	10
B. Works.....	10
C. Services.....	10
§3. Principles of public procurement .....	11
A. Transparency.....	12
B. Competition.....	13
C. Economy .....	14
D. Efficiency.....	15
E. Fairness .....	15
F. Accountability.....	16
Section 2. Electronic procurement.....	16
§1. Definitions of electronic procurement .....	17
§2. Comparison of electronic procurement in Rwanda to other countries.....	18
§.2 Rationale of electronic procurement .....	20

CHAPTER 2. RATIONALE FOR THE ADOPTION OF E-PUBLIC PROCUREMENT .....	21
Section One. Negative impact on the principles of public procurement.....	21
§1. Bureaucracy .....	21
§2. Increasing administrative cost.....	23
§3. Bad quality of products and service acquired .....	25
§4. Doubtful transparency.....	26
Section 2. Positive impact of e-procurement .....	27
§1. Benefits of E-public procurement .....	27
A. Price reduction in tendering .....	27
B. Reduction in time to source materials .....	28
C. Lower Administration costs .....	29
D. Reduction in procurement staff.....	30
E. Gaining competitive advantage.....	30
F. Improving communication.....	31
§2. Benefits of E-Invoicing on public procurement.....	32
§3. Benefits of E-Payment on public procurement .....	33
CHAPTER 3. PROPOSED LEGAL REGIME OF E-PUBLIC PROCUREMENT .....	35
Section one. Legal regime of e-procurement .....	35
§1. Legal framework on e-procurement.....	35
A. E-Advertisement .....	36
B. E-bidding.....	38
C. E-evaluation .....	40
D. E-notification .....	43
E. E-contract management.....	44
F. E-payment .....	44
Section 2. Other challenges noted on E-public procurement to be redressed .....	45
§1. IT infrastructures.....	46
§2. Company culture .....	47
§3. Capacity building on e-procurement knowledge .....	47
§4. Security of transactions.....	48

§5. Lack of system standards .....	49
CONCLUSION .....	50
REFERENCES .....	52

## **Abstract**

Public procurement is the process by which government departments or agencies purchase goods and services from the private sector. It takes place at both a national and regional level, and the process will usually be subject to specific rules and policies covering how the relevant decisions are made.

The reason behind using public procurement is competition, transparency and value for money.

Rwanda public procurement law provides e-procurement. Some contents of e-public procurement are regulated while others are not. The regulated contents are not implemented accordingly in the whole public procurement process.

The lack of implementation of e-public procurement in whole in Rwanda implicates the non respect of the fundamental principles of public procurement of Rwanda. That's why this research will be based on the analysis of the inconveniences for the non implementation of e-procurement, advantages and challenges of using it. This research turns around the following specific research questions:

1. Can e-bidding and e-evaluation be regulated and what are the best practices and challenges thereof?
2. To what extent can the non regulation of e-bidding and e-evaluation be an obstacle to the implementation of the fundamental principles of public procurement in Rwanda?

The lack of regulation of e-bidding and e-evaluation in Rwanda contributes to the non respect of the fundamental principles of public procurement such as transparency and economy. The regulation of e-bidding and e-evaluation will facilitate to bid online, to monitor any step of the procurement process and to ultimately achieve the best value for money in the acquisition of goods, services and works by government institutions.

The development of a country depends on the management of its resources. If the resources are well managed, the citizens live in a good life. The usage of the resources is done by the public procurement. The interest arises once public procurement is done in the adequate manner, the

investment is promoted and the development is achieved. The competition and good quality of the products are promoted.



## GENERAL INTRODUCTION

### 1. Background

A state has different needs for its development. One of the strategies for satisfying the needs is using public procurement. Public procurement is the process by which government departments or agencies purchase goods and services from the private sector. It takes place at both a national and regional level, and the process will usually be subject to specific rules and policies covering how the relevant decisions are made<sup>1</sup>. The reason behind using public procurement is competition, transparency and value for money. Rwanda uses public procurement for satisfying its needs. The main principles enshrined in law n° 12/2007 of 27/03/2007 on public procurement as modified and complemented by the law n°05/2013 of 13/02/2013 are transparency, competition, economy, efficiency, fairness and accountability<sup>2</sup>.

Even if the law is there, the challenges and problems are still available to the public procurement agencies. Referring to the audit reports of RPPA (Rwanda Public Procurement Authority) and Auditor General of Rwanda, the tenders are illegally awarded and the contracts are not well performed<sup>3</sup>.

One of the strategies for promoting those principles is e-procurement. Article 13 of the law n° 12/2007 of 27/03/2007 on public procurement as modified and complemented by the law n°05/2013 of 13/02/2013 provides that whenever available, Information Communication Technology (ICT) shall be used in Public Procurement in matters related to publication of the general procurement notices, advertisement of the procurement opportunities, publication of a summary of the evaluation results, requesting for information on the tender process, dissemination of laws and regulations related to public procurement.

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<sup>1</sup> X., Public procurement, available at <http://www.wisegeek.org/what-is-public-procurement.htm> consulted on 8/8/2015.

<sup>2</sup> Article 4 of the Law n° 12/2007 of 27/03/2007 on public procurement, *OGRR*, n° 8 of 15 April 2007.

<sup>3</sup> Audit Reports of RPPA of 2011-2012, 2012-2013 and 2013-2014 and Auditor General of Rwanda of 2011-2012, 2012-2013 and 2013-2014.

Even if it is regulated like this, the procurement law does not provide e-bidding, e-evaluation<sup>4</sup>, and so on. Most articles did not have a formal discernable definition of electronic procurement. Instead, e-procurement was described in rather general terms, mentioning facets of it as illustrations<sup>5</sup>. There is no single definition of e-procurement. That is why in Rwanda, the meaning of e-procurement as it is described is different from e-procurement in Europe.

## 2. Problem statement

In Rwanda, we have many procurement methods such as open competitive bidding, restricted tendering, request for quotations, single-source procurement/direct contracting, force account, community participation, procurement of consultants services and those methods are done face to face. Some methods take long time from the publication to the time of signing the contract. Open competitive bidding which is the principle in tendering takes between 90 days to 120 days. More so, it is costly on the side of the bidders as well as the procuring entity. Not only that, to use that method face to face can also lead corruption, favoritism and so on. Most of the time, the procuring entity does not know the blacklisted companies in public procurement and the authenticity of the administrative documents given by the different institutions due to lack of e-public procurement.

Rwanda public procurement law provides e-procurement. Some contents of e-public procurement are regulated while others are not. The regulated contents are not implemented accordingly in the whole public procurement process.

The lack of implementation of e-public procurement in whole in Rwanda implicates the non respect of the fundamental principles of public procurement of Rwanda. That's why this research will be based on the analysis of the inconveniences for the non-implementation of e-procurement, advantages and challenges of using it.

This research turns around the following specific research questions:

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<sup>4</sup> Prof. G. M. Racca, "the electronic award and execution of public procurement", p 31. Ius publicum.

<sup>5</sup> Tobias Schoenherr and V. M. Rao Tummala, *Electronic Procurement: A Structured Literature Review and Directions for Future Research*, *International Journal of Procurement Management*, Vol. 1, No. 1/2, 2007, p. 13.

3. Can e-bidding and e-evaluation be regulated and what are the best practices and challenges thereof?
4. To what extent can the non-regulation of e-bidding and e-evaluation be an obstacle to the implementation of the fundamental principles of public procurement in Rwanda?

## 5. Hypotheses

The lack of regulation of e-bidding and e-evaluation in Rwanda contributes to the non-respect of the fundamental principles of public procurement such as transparency and economy. The regulation of e-bidding and e-evaluation will facilitate to bid online, to monitor any step of the procurement process and to ultimately achieve the best value for money in the acquisition of goods, services and works by government institutions.

## 6. Interest of the subject

The development of a country depends on the management of its resources. If the resources are well managed, the citizens live in a good life. The usage of the resources is done by the public procurement. The interest arises once public procurement is done in the adequate manner, the investment is promoted and the development is achieved. The competition and good quality of the products are promoted.

In fact, the choice of this topic “Adoption of **e- procurement and implementation of basic principles of public procurement in Rwanda**” was motivated by the fact that this procurement is actually considered as an instrument of the implementation of principles of procurement. Therefore, there is a problem of the implementation of e-procurement while it is not fully regulated. For that, the issue is to see how e-procurement can be adopted in Rwanda as a country that has made effort in public fund management in order to facilitate the partners of procurement entities that play an important role in the development of the country.

The analysis of public procurement law is important to any research in order to identify the challenges of its implementation.

## **7. Objectives of the research**

The subject aims at:

- Analyzing the challenges in the implementation of the e-procurement in Rwanda;
- Identifying the effectiveness and applicability of the e-procurement;
- Showing and justify the need for regulating the e-bidding and e-evaluation in Rwanda.

This will help find remedies for the problems outlined above problem according to the methods and technical means.

## **8. Research methodology**

The use of different techniques and methods are necessary to achieve the successful completion of this work.

Indeed, different techniques will be used. The technique of documentation will be used to browse the doctrine, reports and case laws available to get consistent ideas with the subject. A comparative method will be used to help us to borrow the best practices.

Moreover, the exegetical method will be used to treat various normative related to the subject. Finally, the analytical method and the synthetic method will be, respectively, used to analyze, interpret the doctrine and case law pertaining to the subject in order to draw some recommendations.

## **9. Delimitation of the subject**

Initiate such a discussion on this subject requires facing the Rwandan public procurement law. The study will deal only with the analysis of the e-public procurement in Rwanda.

Rwanda has legislation on public procurement. Thus, the analysis will be conducted in Rwanda after identifying weaknesses in laws.

This work is divided into three chapters, in addition to the general introduction and general conclusion, the first chapter deals with literature review on public procurement; the second refers to the analysis on the impact of the lack of e-public procurement and the third discusses the proposed legal mechanism on e-public procurement.

## **CHAPTER ONE: LITERATURE REVIEW ON PUBLIC PROCUREMENT**

This chapter gives an overview on historical development of public procurement in Rwanda and deals with the general considerations on procurement and public procurement. It also analyses the electronic public procurement in Rwanda in comparison with other countries.

### **Section one. Procurement**

In this section, the historical development of public procurement in Rwanda, definition of procurement and principles of procurement shall capture our attention.

#### **§1. Historical development of public procurement in Rwanda**

The Public Procurement System in Rwanda has evolved from a crude system with no regulations to an orderly legally regulated procurement system. From the use of 1959 law in public procurement in Rwanda to the Public Procurement Law enacted in April 2007, Rwanda moved towards a national public procurement system which respects international standards.

As in many other countries, the use of the Country Procurement System in Rwanda was adapted following the Paris Declaration on Aid effectiveness endorsed on 2 March 2005 and Accra Agenda for Action drawn down in 2008 that is embedded in a set of five inter-related principles whose aim was to make aid more effective and accountable to the benefiting communities<sup>6</sup>.

The declaration's commitments and targets reflect the lessons donors and partner countries have learnt about how to make aid more effective in reducing poverty.

The Paris Declaration commits donors and partners to make comprehensive and practical changes in these areas. A set of quantified targets is used to assess progress and hold donors and

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<sup>6</sup>Transparency International Rwanda, "procurement assessment system in Rwanda", available at <https://www.tirwanda.org> and OECD, *The Paris Declaration on Aid Effectiveness and the Accra Agenda for Action*, p.12 available at <http://www.oecd.org/dac/effectiveness/34428351.pdf> accessed on 14/02/2016.

partners accountable for achieving results. The Accra Agenda for Action contains new ambitious undertakings by donors and developing countries to speed up the process of fulfilling the Paris Declaration's pledges<sup>7</sup>.

It is against this background that the Rwanda Procurement process had to undergo radical reforms in order to comply with these principles so as to make a profitable use of donor funds in a more effective and transparent manner.

As far as public procurement is concerned, the National Tender Board (NTB) was created in 1997 with the aim of managing and modernizing the public procurement system. Though the NTB contributed a lot in improving the procurement system in Rwanda, it was very crucial to reform the institution to make it more decentralized with ad-hoc organs to challenge the new board. A number of reforms were initiated. The promulgation of the Organic Budget Law in September 2006<sup>8</sup> and the Public Procurement Law in April 2007<sup>9</sup> along with the establishment and operation of their respective regulatory bodies are obvious examples of significant achievements<sup>10</sup>. The public procurement law of 2007 was modified and complemented by the Law n°05/2013 of 13/02/2013.

## **§2. Definitions of procurement and public procurement**

Procurement includes all activities from obtaining goods and services and managing their inflow into an organization toward the end user.<sup>11</sup> The corporate function of the procurement traditionally is divided into two tasks: strategic and operational. Strategic task is sourcing activities, supply management, design and implementation of buying procedure, and operational

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<sup>7</sup> Transparency International Rwanda, "procurement assessment system in Rwanda", available at <https://www.tirwanda.org>, accessed on 14/02/2016.

<sup>8</sup> Organic Law n° 37/2006 of 12/09/2006 on State Finances and Property, *OGRR*, special number of 12 September 2006

<sup>9</sup> Law n° 12/2007 of 29/03/2007 on Public Procurement, *OGRR*, n° 8 of 15 April 2007.

<sup>10</sup> Transparency International Rwanda, "procurement assessment system in Rwanda", available at <https://www.tirwanda.org>, accessed on 14/02/2016.

<sup>11</sup> Gebauer, J. et al. (1998), Impact of Internet on Procurement, p. 2, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.39.193&rep=rep1&type=pdf>

tasks include all transaction-oriented activities like excitement of purchasing orders<sup>12</sup>. As it is defined by the UNCITRAL model law, procurement means the acquisition by any means, including by purchase, rental, lease or hire-purchase, of goods or of construction, including services incidental to the supply of the goods or to the construction if the value of those incidental services does not exceed that of the goods or construction themselves<sup>13</sup>.

Procurement mostly refers to the purchasing of goods and services for frequently use in operation of a business in one of the most essential parts in organization ability in order to work and function efficiently and effectively<sup>14</sup>.

Public procurement is defined as the process of the acquisition, usually by means of a contractual arrangement after public competition, of goods, services, works and other supplies by the public service. The process spans the whole life cycle from initial conception and definition of the needs of the public service through to the end of useful life of an asset<sup>15</sup>. Public procurement can alternatively be defined as the purchase of commodities and contracting of services if such acquisition is effected with resources from state budgets, local authority budgets, states foundation funds, domestic loans or foreign loans guaranteed by the state. Public procurement thus means procurement by the procuring entity using public fund. The items involved in public procurement ranges from simple items or services such as clips or cleaning services to large commercial projects such as the development of infrastructure including roads, power stations and airports. It can also be the acquisition, whether under formal contract or not of works, supplies and services by public bodies<sup>16</sup>.

According to Owegi Aligula, procurement can equally mean the process of acquisition of goods and services (i.e. purchasing) and hiring contractors and consultants to carry out works and services. This includes rental, lease, hire purchase, license, tenancy, franchise or any other

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<sup>12</sup> Gebauer & Sergev, Changing shapes of supply chains: how the internet could lead to a more integrated procurement function, University of California, Berkeley, 2001, p. 10.

<sup>13</sup> Article 2 of UNCITRAL Model Law on Procurement of Goods and Construction (1993), <https://www.uncitral.org/pdf/english/texts/procurem/proc93/proc93.pdf>

<sup>14</sup> S.R. Leonard, Electronic procurement, European Commission's IST programme business and eWork, 2000, p. 12.

<sup>15</sup> Probation Board of Northern Ireland (PBNI) (2010), Procurement Policy, p. 6. Available at <http://www.pbni.org.uk/wp-content/uploads/2015/02/PBNI-Procurement-Policy-15.11.11.pdf>

<sup>16</sup> PPOA, The Long Term Policy Framework for Public Procurement in Kenya, University of Nairobi, 2009, p.1, available at [http://www.ppoa.go.ke/images/downloads/manuals/public\\_procurement\\_policy\\_-\\_draft\\_zero.pdf](http://www.ppoa.go.ke/images/downloads/manuals/public_procurement_policy_-_draft_zero.pdf)



contractual acquisition of works, services and supplies. Procurement also embraces clearing out unnecessary acquisitions. In essence, the subject of procurement runs at all times alongside that of disposal of public assets which once acquired may need to be discarded in accordance with the principles of their purchase<sup>17</sup>.

It is admitted that the scope covers specification of the kind and quality of goods or service to be acquired or disposed, investigation of the market for supply and contacts with potential suppliers or buyers, placing the order or contract, including negotiation of terms, supervising delivery and performance, and taking necessary action in the event of inadequate performance, payment and dealing with any disputes<sup>18</sup>.

All in-bound supply processes are executed by procurement; reason why, Rwanda has enacted the law on public procurement in 2007<sup>19</sup> for the purpose of regulating the procurement processes and methods. All institutions either private or public use procurement in purchasing their goods, services and works they need. In this research, the emphasis is on public procurement used by public government institutions.

According to Rwandan public procurement law,<sup>20</sup> “public procurement” refers to any means of acquisition of goods, works or services by the procuring entity from outside itself in return for a price. The following part emphasizes the things that may be procured.

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<sup>17</sup> Quoted by JONATHAN L. M., The implementation and legislation of public procurement and disposal act (2005) by local authorities in Kenya: a case of County Council of Olkejuado, Master’s thesis, University of Nairobi , 2011, p.7.

<sup>18</sup> See Ph. Kiprop Chemoiywo,, Public procurement procedures and supply chain performance in state corporations in Kenya, Master’s thesis, UNIVERSITY OF NAIROBI, 2014, p. 14, [http://erepository.uonbi.ac.ke/bitstream/handle/11295/76388/Chemoiywo\\_Public%20procurement%20procedures%20and%20supply%20chain%20performance.pdf?sequence=4](http://erepository.uonbi.ac.ke/bitstream/handle/11295/76388/Chemoiywo_Public%20procurement%20procedures%20and%20supply%20chain%20performance.pdf?sequence=4).

<sup>19</sup> In 2007, the Law n° 12/2007 of 27/03/2007 on public procurement went in force and in 2013 was modified and complemented by the Law n°05/2013 of 13/02/2013.

<sup>20</sup> See Article 1, point 15 of the above law

### **A. Goods**

Article 1<sup>0</sup> of the Rwandan public procurement law provides that goods is any objects of every kind including raw materials, products, equipment be it in solid, liquid or gaseous form, electricity, as well as services that are linked to the supply of the goods if the value of those services does not exceed that of the goods themselves. This definition derives from the UNCITRAL Model Law on Procurement of Goods and Construction (1993).

### **B. Works**

Article 1, 17<sup>0</sup> of the procurement law provides that works is all activities related to the building or engineering works upon the request by the procuring entity. It is more explained by the UNCITRAL model law on procurement<sup>21</sup> because the works means all work associated with the construction, reconstruction, demolition, repair or renovation of a building, structure or works, such as site preparation, excavation, erection, building, installation of equipment or materials, decoration and finishing, as well as drilling, mapping, satellite photography, seismic investigations and similar activities incidental to such work if they are provided pursuant to the procurement contract. The Rwandan public procurement law is more general than UNCITRAL model law on procurement.

### **C. Services**

Article 1, 19<sup>0</sup> and 20<sup>0</sup> of Rwandan procurement law provides that services is any services other than consultant services in accordance with the provisions of this law and the consultant services is considered as any intellectual services or of intangible nature. It is also called “Consulting services” which refer to services of a professional nature provided by consultants using their skills to study, design, organize, and manage projects; advise clients; and, when required, build their capacity. Consultants offer clients the possibility of a more effective and efficient allocation

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<sup>21</sup> See Article 2,d of the UNCITRAL Model Law on Procurement of Goods and Construction (1993)

of their resources by providing specialized services for limited amounts of time without any obligation of permanent employment<sup>22</sup>.

Consulting services encompass multiple activities and disciplines, including the expertise of sector policies and institutional reforms, specialist advice and integrated solutions, change management and financial advisory services, planning and engineering studies, and architectural design services. Consultants also provide project supervision, social and environmental assessments, technical assistance, and program implementation. Consulting services may vary from simple routine tasks to highly specialized and complex assignments<sup>23</sup>.

Any procurement laws and procurement process in different countries are useless if are not guided by the principles; that is why the following part is based on the Rwandan principles of public procurement.

### **§3. Principles of public procurement**

Public procurement principles set the framework for managing public procurement requirements, and also within which procurement practitioners' must work.<sup>24</sup> ClientEarth tries to discuss the guiding principles of public procurement such as transparency, equal treatment and proportionality<sup>25</sup>. Those are the overarching principles governing the public procurement procedure. The principles of equal treatment and transparency are really two facets of the principle of non-discrimination. Equal treatment requires that comparable situations are not treated differently and that different situations are not treated similarly unless such a difference or similarity in treatment can be justified objectively<sup>26</sup>.

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<sup>22</sup> RPPA, *Intermediate level training module in public procurement*, 2012, p.65.

<sup>23</sup>The World Bank, *Consulting Services Manual 2006 Consulting Services Manual 2006 A Comprehensive Guide to the Selection of Consultants*, Washington, D.C., 2006, p.1

<sup>24</sup> G. Lynch, *Public Procurement principles*, <http://procurementclassroom.com/public-procurement-principles/>

<sup>25</sup> ClientEarth, "The guiding principles of public procurement transparency, equal treatment and proportionality", available at <http://www.clientearth.org>, accessed on 14/4/2016.

<sup>26</sup> *ibidem*

European Bank for Reconstruction and Development (EBRD), in its review conducted in 2009, judged core principles on an efficient public procurement legislative framework. It specified those core principles as accountability, integrity, transparency, competition, economy, efficiency, proportionality, comprehensive and limit derogations, stable, but flexible and be enforceable<sup>27</sup>.

The fundamental principles governing public procurement in Rwanda are outlined in Article 4 of law n° 12/2007 of 27/03/2007 on public procurement as modified and completed. In establishing this law, one of the main objectives of the Government of Rwanda has been to create a market that eliminates barriers to trade in goods and services. Creating a procurement market means removing any barriers to trade arising from the public procurement context. This part emphasizes the fundamental principles such as transparency, competition, economy, efficiency, fairness and accountability.

### **A. Transparency**

Transparency in procurement takes form in a variety of practices, such as: publishing procurement policies; advance publication of procurement plans; advertisement of tender notices; disclosure of evaluation criteria in solicitation documents; publication of contract awards and prices paid; establishing appropriate and timely complaint protest/dispute mechanisms; implementing financial and conflict of interest disclosure requirements for public procurement officials; and publishing supplier sanction lists<sup>28</sup>.

Transparency is considered to be a prerequisite for ensuring the accountability of public officials. In this regard, there is broad agreement that the effectiveness of transparency can be further strengthened by empowering monitoring and oversight organizations within civil society to scrutinize procurement, as they can play an important role as watchdogs for public sector integrity<sup>29</sup>.

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<sup>27</sup> EBRD, Core Principles on an Efficient Public Procurement Framework, available at [www.ebrd.com](http://www.ebrd.com) accessed on 14/4/2016.

<sup>28</sup> UNOPS, Transparency and public procurement, Supplement to the 2011 Annual Statistical Report on United Nations Procurement, 2011, p. 2.

<sup>29</sup> *Ibid.*

Some authors argued that transparency has come to mean “active disclosure<sup>30</sup>.” Others have defined government transparency as “the publicizing of incumbent policy choices<sup>31</sup>,” and “the availability and increased flow to the public of timely, comprehensive, relevant, high-quality and reliable information concerning government activities<sup>32</sup>.”

Other scholars define the transparency as about the application of procedures in a manner which is open, clear, easily accessible and predictable. The test is that bidders must see the procurement as being transparent<sup>33</sup>.

## **B. Competition**

It is about providing the bidders with equal opportunity and treatment in bidding for procurement contracts. Competition should be seen to be open and fair in order to be sustainable and to achieve economy<sup>34</sup>. The basic idea behind this principle is that competition leads to reasonable price, quality and is good for the economy; consequently, the public procurement process should not be manipulated to give preference to any particular firm(s) or individual(s). And given that public procurement is funded with tax payers’ money, all qualified firms and individuals should be allowed to participate by submitting bids and/or proposals on requirements for which they are qualified. Additionally, public procurement requirements should be widely disseminated to increase the chances of a good market response leading to the award of competitively-priced contracts<sup>35</sup>.

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<sup>30</sup> Richard W. Oliver cited in W.Ginsberg et al., “Government Transparency and Secrecy: An Examination of Meaning and Its Use in the Executive Branch”, available at <https://www.fas.org/sgp/crs/secrecy/R42817.pdf> , accessed on 16/02/2016

<sup>31</sup> Justin Fox cited in W.Ginsberg et al., “Government Transparency and Secrecy: An Examination of Meaning and Its Use in the Executive Branch”, available at <https://www.fas.org/sgp/crs/secrecy/R42817.pdf> , accessed on 16/02/2016

<sup>32</sup> David Ferranti et al. cited in W.Ginsberg et al., “Government Transparency and Secrecy: An Examination of Meaning and Its Use in the Executive Branch”, available at <https://www.fas.org/sgp/crs/secrecy/R42817.pdf> , accessed on 16/02/2016

<sup>33</sup> CHRISTIAN M. AND ALEMANTE E. G., ‘*Assessment of Effectiveness of Public Procurement Process: the case study of Ministry of Finance and Economic Affairs In Tanzania*’, Master’s Thesis, Karlstad Business School, Sweden, 2012, p. 20.

<sup>34</sup> Joskow, P. L., “*Transaction Cost Economics and Competition Policy*”. *Journal of law, economics and organizations*, 1991, p. 53

<sup>35</sup> *Idem*, p. 60.

It is worth noting that not all contracts are awarded using a competitive process because this depends on the urgency of need and the resulting procurement method used to fulfill specific requirements. The use of non-competitive procurement methods, although justified under certain circumstances, should be kept to a minimum. Examples of non-competitive procurement methods are: shopping (also called request for quotations or invitation to quote), and direct contracting (single/sole sourcing). Each of these non-competitive procurement methods have their purpose and should not be misused.<sup>36</sup>

### **C. Economy**

Known by other terms such as: value for money, commercially reasonable price, etc., this principle places emphasis on the need to manage public funds responsibly such that prices paid for goods and services are reasonable and represent good value (in terms of quality) for the amount of public funds expended on them. Everyone involved in the public procurement process or directly responsible for facilitating the acquisition of goods and services with public funds, should avoid fraud, waste and abuse of public resources, whether it be through inflated specifications, paying unreasonably high prices for substandard goods, collusion with bidders, or other irregular and unethical practices<sup>37</sup>.

Procurement should be about giving the procuring entity the best value for money, with value being defined as more than just price, but quality assessment as well. More often lowest initial price may not equate to lowest cost over the operating life of the item procured. But the basic point is the same: the ultimate purpose of sound procurement is to obtain maximum value for money<sup>38</sup>.

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<sup>36</sup> See The Procurement Classroom, <http://procurementclassroom.com/competition/>

<sup>37</sup> The procurement classroom, "Public and Project Procurement for Beginners and Aspiring Procurement Practitioners", available at <http://www.procurementclassroom.com>, accessed on 16/02/2016.

<sup>38</sup> Richard W. Oliver cited in W.Ginsberg et al., "Government Transparency and Secrecy: An Examination of Meaning and Its Use in the Executive Branch", available at <https://www.fas.org/sgp/crs/secrecy/R42817.pdf>, accessed on 16/02/2016

### **D. Efficiency**

It is being simple and timely, practical and meeting the available budget of the Procuring Entity to achieve positive results devoid of any unnecessary delays in the program implementation. Efficiency implies being practical in terms of compatibility with the administrative resources and professional capabilities of the procuring entity and its procurement personnel<sup>39</sup>.

### **E. Fairness**

It is about being impartial, consistent and reliable. Potential bidders should have a level playing field which directly expands their options and opportunities thereby encouraging them to compete<sup>40</sup>.

There are different interpretations of fairness in public procurement, so rather than defining it as treating bidders equally, it is rather more appropriate to mention how it is to be achieved.

For there to be fairness in the public procurement process, J. Lunch<sup>41</sup> considers that the following requirements have to be met:

Firstly, decision-making and actions should be unbiased and there should be no preferential treatment (to individuals or firms) given that public procurement activities are undertaken with public funds.

Secondly, all bids should be considered on the basis of their compliance with the terms of the solicitation documents, and a bid should not be rejected for reasons other than those specifically stipulated in the solicitation document.

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<sup>39</sup> The procurement classroom, "Public and Project Procurement for Beginners and Aspiring Procurement Practitioners", available at <http://www.procurementclassroom.com>, accessed on 16/02/2016.

<sup>40</sup> E. A Agaba. "Public procurement reform in developing countries. Advancing public procurement practices", (2007), p. 300.

<sup>41</sup> Lunch, J., Public and Project Procurement for beginners and aspiring procurement practitioners, available at <http://www.procurementclassroom.com>, accessed on 16/02/2016.

Thirdly, a contract should only be signed with the bidder whose bid is compliant and responds best to the objectives of the requirement in terms of technical capability and price.

Fourthly, bidders should have the right to challenge the bidding process whenever they feel that they were unfairly treated. Such challenges must be based on the solicitation document and/or the procurement legal framework

## **F. Accountability**

For J. Lunch, accountability in public procurement essentially means to be responsible for our actions and decisions, and having the obligation to report and/or answer to a designated oversight entity (and the public) on the consequences of those actions and decisions. As public servants procurement practitioners, and others involved in the public procurement process, are accountable and thus exposed to sanctions as a remedy for any behavior that contravenes the public procurement legal framework and principles<sup>42</sup>.

It is about bestowing a sense of responsibility to its users, making them accountable for their actions and/or inactions by enforcing established rules and procedures. Good procurement holds its practitioners responsible for enforcing and obeying the rules. It makes them subject to challenge and to sanction, if appropriate, for neglecting or bending those rules<sup>43</sup>.

As analysed in section one related to procurement and public procurement and its fundamental principles, it is worth to discuss the meaning of electronic procurement and its importance in public procurement.

## **Section 2. Electronic procurement**

In this section, we review the definition of electronic procurement under the Rwandan Public Procurement law in comparison with legislations of other countries.

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<sup>42</sup> Ibid.

<sup>43</sup> X, Procurement procedures, available at [www.library.ewh.org](http://www.library.ewh.org) , accessed on 12/02/2016.



## §1. Definitions of electronic procurement

Electronic procurement does not have the formal definition. Instead, electronic procurement was described in rather general terms, mentioning facets of it as illustrations. While there was general agreement that electronic procurement entails the use of electronic means to source products and services, subtle differences existed<sup>44</sup>.

According to the module of RPPA on procurement, electronic procurement is the use of Information & Communications Technology (especially the Internet) by governments in conducting their procurement relationships with suppliers for the acquisition of goods, works, and consultancy services<sup>45</sup>.

Ch. SRI RAMA MURTHY defines electronic procurement (EP) as the sourcing of goods or services via electronic means, usually through the Internet<sup>46</sup>. Boer et al. cited in. Ch. SRI RAMA MURTHY describe EP as encompassing several functionalities including e-MRO, web-based ERP, e-sourcing, e-tendering, e-reverse auctioning and e-informing, which can be realized via electronic marketplaces, intranets and extranets<sup>47</sup>.

The Rwandan procurement law provides for electronic procurement. Article 13 of the procurement law provides that whenever available, Information Communication Technology (ICT) shall be used in Public Procurement in matters related to:

1. Publication of the General Procurement Notices;
2. Advertisement of the procurement opportunities;
3. Publication of a summary of the evaluation results;
4. Requesting for information on the tender process;
5. Dissemination of Laws and regulations related to public procurement.

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<sup>44</sup> David Ferranti et al., *op. cit.*, p. 9.

<sup>45</sup> RPPA, *op. cit.*, p. 66.

<sup>46</sup> Ch. SRI RAMA MURTHY, "what is electronic procurement: a literature review", International journal of multidisciplinary advanced research trends, volume 1, issue 2, September 2014, p. 30.

<sup>47</sup> Boer et al. cited in Ch. SRI RAMA MURTHY, *op. cit.*, p. 31.

The following paragraph shall compare the meaning of electronic procurement as defined by the Rwandan public procurement law to other definitions from other countries.

## **§2. Comparison of electronic procurement in Rwanda to other countries**

As mentioned above, there is no single definition of electronic procurement. It is based on the country and its needs to satisfy. Electronic procurement under Rwandan public procurement system does not also have its definitions; it rather shows its use. A quick analysis of the legal provision there of shows that it misses important stages of the procurement such as e-bidding, e-evaluation and e-contract management, e-payment and so on. The essence of public procurement is to ensure the fundamental principles of procurement are achieved. To achieve those principles, the e-bidding and e-evaluation are very important. Unfortunately, they are missing in the definition of the e-procurement under Rwandan law.

In Nepal, for example, with respect to electronic procurement, electronic submission is used but evaluation and contract awarding is done manually<sup>48</sup>.

In Netherlands, it is reported that electronic procurement is used through TenderNed. TenderNed is the Dutch government's online tendering system. All Dutch authorities are obliged to publish their national and European tenders on TenderNed's announcement platform, so businesses can access all public publications from a single webpage. It has a full digital tender process from announcement to submission and award of the contract, it frequently used data only needs be entered once and can be managed in a personal folder, reduction of procedural errors and time-saving teamwork in the cloud Free and independent and secure<sup>49</sup>.

Through TenderNed, all parties can digitally manage all steps throughout the entire tender process. This is determined by the contracting authority. When they publish a tender, it is indicated whether businesses must submit their offer digitally in TenderNed. If this is the case,

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<sup>48</sup>Er PRABIN, "*E-bidding in Nepal*", Hetauda Research and Training Center, 2012, p. 2

<sup>49</sup> TenderNed available at <https://www.tenderned.nl/tenderned-english>, accessed on 15/02/2016

interested businesses submit their complete offers through TenderNed. Scoring and rewarding is also carried out online<sup>50</sup>.

An OECD study indicates that France has legal provisions regarding suitable procedures in the use of electronic transmission which have to take into account the characteristics of the contract (particularly the subject matter and the amount of works, supplies or services) and not restrict competition. Procurement officers can request electronic transmission and reject replies which are not sent electronically. This applies to all procedures since the start of 2010. The detailed rules on electronic procedures are set out in a Government Decree that supplements the general rules in the Public Procurement Act<sup>51</sup>.

According to Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC<sup>52</sup> and Directive 2014/24/EU on public procurement and repealing Directive 2004/18/EC<sup>53</sup> provide steps for achieving full use of electronic procurement in all countries of European Union and those countries to be prepared to comply with the directive abovementioned not later than October 2018 as follows:

- Making electronic means of communication mandatory by April 2016 for certain phases of the procurement process including the electronic notification of tender opportunities and the electronic availability of tender documents (at the expected transposition of the revised Directive). Central purchasing bodies would also move to full electronic means of communication including the electronic submission of bids by April 2017;
- Making e-submission mandatory for all contracting authorities and all procurement procedures by October 2018 (two years after the expected transposition of the revised Directive);

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<sup>50</sup> *Ibidem*

<sup>51</sup> OECD, Public Procurement in EU Member States - The Regulation of Contract Below the EU Thresholds and in Areas not Covered by the Detailed Rules of the EU Directives, OECD Publishing, 2010, P. 18

<sup>52</sup> Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC, Official Journal of the European Union L 94/243 of 28.3.2014

<sup>53</sup> Directive 2014/24/EU on public procurement and repealing Directive 2004/18/EC of 26 February 2014, Official Journal of the European Union L 94/65 of 28.3.2014.

- Adopting more detailed provisions to encourage interoperability and standardization of e-procurement processes<sup>54</sup>.

Those examples show that the definition of electronic procurement in Rwanda does not cover all steps of public procurement process. This calls for the review of the Rwanda public procurement law especially on electronic procurement.

Even if the use of electronic procurement is different from one country to another, the objective to achieve is the same as implementing the fundamental principles of procurement.

## **§.2 Rationale of electronic procurement**

Electronic procurement enhances key principles of procurement namely; transparency, value for money (efficiency), and timeliness. E-procurement enhances transparency and fairness by bringing together procuring entities and bidders in a virtual environment. Enhanced transparency and fairness brings increased private practitioners' confidence in the procurement system. This confidence increases participation and competition.

It also asserted that the rationale of e-Procurement is to e-enable the management of the supply chain processes such as sourcing, tendering, auctioning, bidding, purchase requisitioning, ordering, stock management, monitoring delivery and supplier performance, and more importantly, encompassing of secure payment settlement, all these to be achieved by either stand alone, shared or integrated software tools<sup>55</sup>. The rationale of e-procurement in any costs should be for promoting the principles of public procurement and achieving the objectives of public procurement which is the satisfaction of the needs of government and public institutions.

The first chapter of this research reviewed some literature on public procurement and various definitions of electronic procurement; the following chapter shall analyze the impact of the lack

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<sup>54</sup> European Commission, E-procurement, available at [http://ec.europa.eu/growth/single-market/public-procurement/e-procurement/index\\_en.htm](http://ec.europa.eu/growth/single-market/public-procurement/e-procurement/index_en.htm), accessed on 15/02/2016.

<sup>55</sup> X., procurement goals, available at [http://plenitude-solutions.com/index.php?option=com\\_content&view=article&id=54&Itemid=62](http://plenitude-solutions.com/index.php?option=com_content&view=article&id=54&Itemid=62)

of electronic public procurement in Rwanda in light of the fundamental principles of public procurement in general as provided by the law on public procurement.

## **CHAPTER 2. RATIONALE FOR THE ADOPTION OF E-PUBLIC PROCUREMENT**

In examining this chapter on the rationale for the adoption of e-public procurement, it is worth seeing what might be the advantages and the disadvantages of e-procurement. With regard to some negative aspects, issues such as bureaucracy, increasing administrative cost, bad quality of products and service acquired doubtful transparency have been mentioned. on the one hand. But on the other hand, positive aspects such as benefits attributed to E-public procurement, benefits of E-Invoicing on public procurement and benefits of E-Payment on public procurement were also highlighted.

### **Section One. Lack of e-public procurement and its impact on the achievement of public procurement principles**

The lack of the E-public procurement has a negative impact on the achievement of the principles of public procurement. This can be seen with respect to bureaucracy, the increasing of administrative cost, bad quality of products and service acquired and doubtful transparency.

#### **§1. Bureaucracy**

Any unnecessary bureaucracy introduces waste and delay, reduces the likelihood of effective competition and jeopardises delivery. Long procurement timescales slow down the delivery of tenders and increase costs for all involved. Long and unpredictable timescales reduce competition by absorbing scarce bid capacity and discouraging suppliers from competing in the future<sup>56</sup>.

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<sup>56</sup> Paul B.and Douglas A., "Reducing Bureaucracy in Central Civil Government Procurement", London, 2003, available at <https://www.bipsolutions.com/docstore/pdf/17290.pdf>

It was revealed from the study carried out by the European Commission that one of the challenges on the Procurement Act in Europe was delays in the procurement process. For instance, it was found out that advertisement for procurement opportunities and evaluation periods took an amount of time that affected the smooth procurement activities and delayed the procurement process. Auditing is considered to be a crucial ingredient for a successful implementation of the Public Procurement Act. The study revealed that procurement entities had quality control and auditing in their respective offices and their activities were regularly audited to check arbitrary expenditure and achieve accountability. Most procurement entities consulted followed the laid down procedure or the provision of the Act which states that all the procurement entities should prepare procurement plans. These bureaucratic processes according to the respondents delayed the procurement process. These other causes as gathered from the study corroborate the findings of assertion that, one of the effects of bureaucracy in procurement is delay of project implementation<sup>57</sup>.

The European Commission (EC) estimates that its member countries annually would save at least 4 percent of their purchasing budgets, provided that they would apply consistent and competitive tender procedures in their dealings with suppliers<sup>58</sup>. This means that bureaucracy and undue procedures in procurement process may lead to loss of money through over spending and it affects government budget. It is also clear that Weele's view is not far different from the World Bank's assertion that delays as a result of bureaucratic system increase government expenditure<sup>59</sup>.

Efficiency and effectiveness in procurement ensures expenditure control since they minimise cost and ensures value for money. Traditional public procurement leads to bureaucracy in financial management. Therefore, E-public procurement is the best answer of reducing bureaucracy in public procurement.

If one analyzes the procurement process as it is provided in the Rwandan procurement law, the timeframe from advertisement of the tender up to the awarding contract to the successful bidder,

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<sup>57</sup> Coppens, O. (2009). Does competition save taxpayer's money in public procurement? [Online] available at [http://ec.europa.eu/economy\\_finance/publications/publication16259\\_en.pdf](http://ec.europa.eu/economy_finance/publications/publication16259_en.pdf) accessed on 10/03/2016

<sup>58</sup>Weele, V. Purchasing and Supply Management, Thomson press, Ohio, 2000, p. 30.

<sup>59</sup> Patrick, A. S. and Richard B. M., "Assessing the Effect of the Procurement Act (663) on the Public Financial Management in Ashanti Region", available at <http://www.pubs.sciepub.com/ajrd/1/4/5/>, accessed on 10/3/2016

the timeframe to carry out it is about 4 months. The said timeframe is considered because most of the time, the bid security required by the procuring entity is 120 days counting from the opening day of the bids. It means that it may take more than 4 months when you include one month of the advertisement. These bureaucratic processes delay the procurement process.

## **§2. Increasing administrative cost**

Public procurement increases the administrative costs. Each and everything used in the process needs money. The procuring entity may use for one tender more than one hundred (100) papers of the bids document without counting the papers used by the bidders. Article 22 of the Law n° 05/2013 of 13/02/2013 modifying and completing the Law n° 12/2007 of 27/03/2007 on public procurement provides that the procuring entity shall provide copies of the bidding document in accordance with the invitation to tender. The procuring entity may charge a fee for obtaining copies of the bidding documents. The procurement regulations shall determine acquisition costs of these documents. The cost of the bidding document shall only be equivalent to the amount of money required for its cost of reproduction and its distribution to be paid to the bidders. Another example is the cost used for transport for picking the bids documents, notifications and any other correspondences regarding a tender.

Traditional procurement involves getting quotes and then approval, probably from finance, as well as a purchase order, which could take more than a week. In business, time is money, so the more a company can reduce staff time involved in purchasing, and the more quickly it issues a purchase order, the more it can reduce operational costs<sup>60</sup>.

In a study conducted by the European Union for analyzing the cost spent in the implementation of the Directives on procurement process and to be a base of the enactment of E- public procurement; it was found that, as a result of the Directives, the administrative costs of the tendering process have increased for awarding authorities and also those suppliers' costs of bidding have increased in the following way:

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<sup>60</sup> X., "Choosing the right procurement method for your business", available at <https://www.bdc.ca/en/articles-tools/operations/purchasing/pages/traditional-vs-e-procurement.aspx>? accessed on 10/3/2016

(a) For awarding authorities the factors increasing costs include the legal rights for bidders that were introduced by the Directives. The authorities subject to the Directives are obliged significantly to increase the accuracy and volume of their documentation and the formality of the process (for example, spelling out their specifications in more detail) in order to reduce the risk of legal challenge. There are indeed complaints that in order to comply with the Directives the authorities have to follow certain procedures even in cases where they believe that the procedures are not efficient. Overall the administrative costs for awarding authorities have gone up by 20-40 per cent (on average in our sample by 35 per cent). The additional cost is a substantial burden in relation to small contracts but a modest additional cost for middle sized and large contracts (meaning for contracts above the thresholds). For these contracts, it is estimated that overall, the Directives have added to the administrative costs of the authorities by an amount equivalent to about 0.2 per cent of the contract values<sup>61</sup>;

b. For suppliers, administrative costs have also increased due to the higher formality of the process which increases the need for form filling and also requires more detailed proposals. Administrative costs for suppliers in their sample rose by 30-50 per cent (on average by 42 per cent). Administrative costs rose less than proportionally with contract size so that the extra burden is greatest for small contracts. Overall the Directives added to the administrative costs of the suppliers an amount equivalent to about 0.2 per cent of the average contract value. Moreover, the implication of the numbers of tenders for each contract advertised is that suppliers have to bid more often for a more or less fixed sum of work (they have no reason to believe that the total amount of public procurement increased due to the Directives). These additional bidding costs may double the extra costs incurred to suppliers in relation to each successful bid<sup>62</sup>.

We concur with these authors as regards the increment of the administrative costs due to traditional public procurement. Many papers are used, money for advertisement are paid, cost for communication and transport are incurred, etc.

To achieve a reduction in the cost of goods and services, e-procurement is seen as both a price-cutting tool for purchasing, and a system that allows repetitive and real-time bidding by multiple

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<sup>61</sup> Europe Economics Chancery House, Evaluation of Public Procurement Directives, London, 2006, p. 2., [http://ec.europa.eu/internal\\_market/publicprocurement/docs/summary\\_en.pdf](http://ec.europa.eu/internal_market/publicprocurement/docs/summary_en.pdf)

<sup>62</sup>Europe Economics Chancery House, *Op. cit.*, p. 3.



suppliers, which ultimately reduces purchasing cycle time. Carter et al. describe buyers who have used e-procurement, and most agree that it increases levels of trust, provides greater access to supplier data, and decreases cycle times for suppliers<sup>63</sup>. It strengthens connections in supply chain management, as everything is sorted out by computer, price benefits are efficiently decreased, and companies avoid unnecessary inventory<sup>64</sup>.

If the procurement process is done electronically, with no doubt the administrative cost may be reduced appropriately and also may protect environment.

### **§3. Bad quality of products and service acquired**

Non E-Public procurement is the source of getting bad quality of products and service acquired because it discourages the suitable bidders who are far from the procuring entity. The world becomes one village through the technology; that is why E-public procurement may help the bidders who are all over the world to bid electronically. If E-public procurement becomes the only way for bidding, this may help anyone who is competent and able to supply the needed products and services without the challenge of submitting the hard copy of the bid and being present on the day of opening of the bids.

Lack of e-public procurement may lead to fraud caused by the bad quality of products and service acquired. Fraud can happen when the tender process has not been followed so that fraud can be committed, or when there is bid rigging. It can also happen when there are payment claims for goods or services that were not delivered or were inferior to what was specified in the order. What qualifies as procurement fraud? These activities include bribes and kickbacks to cover up falsified pricing, product substitutions, substandard quality issues, anticompetitive policy violations, counterfeit goods and the occasional shell companies that involve an employee and sometimes a close outside collaborator. Such frauds can focus on the acquisition of raw materials, services, finished goods and components. Perpetuators of procurement fraud include

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<sup>63</sup> Carter, Kaufmann, Beall, Carter, Hendrick, & Petersen cited in Y.W Yu et al., "*Decision-making factors for effective industrial e-procurement*", Taiwan, 2008, p. 2.

<sup>64</sup> Ibidem

the internal buyer, external supplier or rogue employee with enough authority to approve purchases and possibly, invoice payments<sup>65</sup>.

Bad quality of products and service acquired may be caused also by the successful bidder because he/she thinks that no one may compare the requested products or services with the technical specification. It may also be a loophole of corruption.

Regarding defective pricing, this occurs when a contractor does not submit or disclose to the government cost or pricing data that is accurate, complete, and current prior to reaching a price agreement. Defective parts may be a defect in design, specification, material, manufacturing and workmanship, which may cause death, injury or severe occupational illness; would cause loss of major or minor capabilities of using organisation or which would result in a production line stoppage<sup>66</sup>.

As long as the e-public procurement is legalized and used in Rwanda, we think that it may help to get good quality of the products received and services acquired by the procuring entity.

#### **§4. Doubtful transparency**

Traditional public procurement which is used nowadays may be doubtful in its transparency. Face to face contact may increase opportunities for corruption. E-public procurement can minimize unnecessary face to face contact and reduce opportunities for the improper exercise of discretion. E-public procurement is a way to allow monitoring and maximizing of the level of accountability. It provides a reliable audit trail for later evaluation and review. Automation can be used to eliminate the most vulnerable points in manual systems. E-procurement can contribute to the anti corruption effort<sup>67</sup>.

A transparent transaction process is a key driver for e-procurement. For example, companies that have private B2B supplier software, integrated with a supplier's order fulfillment system or linked to their product catalog on the website of the supplier's platform, will be able to reduce administrative tasks, accelerate processes, provide more paperwork accuracy, and improve

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<sup>65</sup> K. Matthew et al. , *"The effects of fraudulent procurement practices on public procurement performance"*, Kampala 2013, available at [http://cprenet.com/uploads/archive/IJBBS\\_12-1193.pdf](http://cprenet.com/uploads/archive/IJBBS_12-1193.pdf), accessed on 12/3/2016

<sup>66</sup> *Ibidem*

<sup>67</sup> OECD, *Fighting Corruption and Promoting Integrity in Public Procurement*, OECD Publishing, 2005, p. 90.

transparency in the collaboration with its suppliers. A fair and transparent auction process allows the buyer and seller to make their decisions effectively. The process and steps of every e-procurement action is observed and recorded in the system<sup>68</sup>.

This shows that even if the procurement entity may try its best to procure in transparent manner, the unsuccessful bidder may doubt the process. The only solution to increase the confidence of the bidders is to use e-public procurement.

## **Section 2. Positive impact of e-procurement**

### **§1. Benefits of E-public procurement**

E-public procurement represents an on-line environment involving the complex interactivity of public-private, private-private and public-public sectors rather than just a simple interface between government buyers and private sellers<sup>69</sup>. Undoubtedly international agendas are typically more extensive and complex than those of private organisations where efficiency, cost reduction and time savings are sufficient justifications for e-procurement adoption. The following item will tackle the benefits of electronic procurement.

#### **A. Price reduction in tendering**

E-public procurement has the benefit of reducing prices in tendering like administrative cost and consequently it reduces the price of the tender. According to empirical studies carried out in the United States of America, the two most important measures for the success of procurement processes are cost and time<sup>70</sup>. In this method, there is no paperwork, postage fee and other costs associated with preparation and sending tender documents. It is also faster to send a document electronically as compared to the traditional method of sending tender documents through post office. It results to improved order tracking and tracing, for it is much easier to trace the orders and make necessary corrections in case an error is observed in the previous order.

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<sup>68</sup> Behnam Bahreman, Investigating Benefits and Limitations of applying e-procurement in B2B Automakers companies in Iran, Lulea University of Technology, Master Thesis, 2010, p. 44.

<sup>69</sup> J. Leukel and G. Maniatopoulos, "A comparative analysis of product classification in public vs. private e-procurement", UK, 2005, p. 203.

<sup>70</sup> Gebauer J., Beam C. and Segev A. (1998). Impact of the internet on purchasing practices, *Acquisitions Review Quarterly* Vol. 5 No. 2 167-184.

A survey in the USA in 2001 resulted in 75% of respondents citing reduction in costs<sup>71</sup>.

Korean's electronic procurement system has made the process much more efficient. This has led to savings of approximately USD 3 billion annually thanks to the acquisition of integrated bidding information by all public institutions, a one-time registration with GePS, e-bidding through internet, online transfer of payment and the reduction of paperwork<sup>72</sup>.

## **B. Reduction in time to source materials**

Reduction in time has been proved as a relevant driver by Knudsen in Sweden cited in Robert E. et Al., who says "*E-procurement is a rapid efficient method of finding and connecting new sources, being a lean channel for communication*"<sup>73</sup>. A lot of time is spending on paper invoicing in terms of writing, filing and postal communication but while in e-procurement, staff have sufficient time to engage on strategic issues of procurement. The time wasted in moving from one town or country to another to look for a potential supplier or buyer is greatly reduced since with a click of a button, you can readily get the information in the internet. By extension, E-procurement leads to reduction in maverick buying. Maverick buying is when staff buys from suppliers than those with whom a purchasing agreement has been negotiated.

Further comments by McIntosh & Sloan<sup>74</sup> and Ribeiro<sup>75</sup> in USA and UK respectively, state that industry wide adoption of e-procurement initiatives could significantly add to streamlining material procurement processes and bring speed, flexibility, efficiency and increased profit margins to organisations. Rankin<sup>76</sup> shows a reduction in the complete procurement cycle time as a result of e-procurement implementation.

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<sup>71</sup> National Institute of Governmental Purchasing, journal of public procurement under the FAUNIGP partnership, 2001.

<sup>72</sup> OECD, Fighting Corruption and Promoting Integrity in Public Procurement, OECD Publishing, 2005, p 101

<sup>73</sup> Knudsen D. cited in *Robert E. et Al.*, drivers and barriers to public sector e-procurement within northern ireland's construction industry, 2007 available at [www.itcon.org](http://www.itcon.org)

<sup>74</sup> McIntosh. G. and Sloan. B. cited in *Robert E. et Al.*, drivers and barriers to public sector e-procurement within northern ireland's construction industry, 2007 available at [www.itcon.org](http://www.itcon.org)

<sup>75</sup> Ribeiro F. and Henriques P cited in *Robert E. et Al.*, drivers and barriers to public sector e-procurement within northern ireland's construction industry, 2007 available at [www.itcon.org](http://www.itcon.org)

<sup>76</sup> Rankin J., Chen Y. and Christian A. cited in *Robert E. et Al.*, drivers and barriers to public sector e-procurement within northern ireland's construction industry, 2007 available at [www.itcon.org](http://www.itcon.org)

In a survey in the USA 85% of the respondents indicated that they achieved time savings through E-Procurement<sup>77</sup>. Time reduction was therefore considered to be an important benefit that needs to be ranked in this study.

As discussed in the part of bureaucracy as the negative impact of the public procurement used by the Rwandan public institutions in their procurement processes that it takes at least 4 months from the advertisement up to the awarding of the contract; the e-procurement may reduce that time up minimum possible depending to the methods used by the procuring entity.

### **C. Lower Administration costs**

One way of assessing whether administration costs have fallen is through the examination of profits that do not induce competition. Knudsen cited in Robert E. et Al. carried out a study in 2003 which showed that efficiency savings could be increased by adopting E-procurement initiatives<sup>78</sup>. However, his work did not rank the efficiency savings identified against other benefits of e-procurement. This study is therefore adding to knowledge by assessing lower administration costs against the other benefits. Rankin cited in Robert E. et Al. shows that reduction in paperwork and therefore lower administration costs ranked second highest benefit for e-procurement in construction in Canada<sup>79</sup>.

Article 22 of the Rwandan procurement law paragraph 2 and 3 provides that the procuring entity may charge a fee for obtaining copies of the bidding documents. The procurement regulations shall determine acquisition costs of these documents. The cost of the bidding document shall only be equivalent to the amount of money required for its cost of reproduction and its distribution to be paid to the bidders. One copy of bidding document has at least 100 papers; that is why most of the time, the procuring entity requests ten thousand Rwandan francs (10000 rwf) per one copy of bidding document. This shows that without any doubt that the e-procurement may reduce the administrative costs without also counting the transport, papers of notification and etc.

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<sup>77</sup>National Institute of Governmental Purchasing cited in *Robert E. et Al.*, drivers and barriers to public sector e-procurement within northern ireland's construction industry, 2007 available at [www.itcon.org](http://www.itcon.org)

<sup>78</sup> Knudsen D., *op. cit.*, p. 725.

<sup>79</sup> Rankin J. et al. cited in *Robert E. et Al.*, *op. cit.*

#### **D. Reduction in procurement staff**

As Robert E. et al. noted, the reduction in staff is an important way of producing competitive advantage through reduced costs<sup>80</sup>. This is further supported by Egbu et al. cited in Robert E. et al., in his study which revealed that through implementation of an e-procurement system, a steel supplier was able to carry out a multi-million pound project with only 20% of the staff the company would normally have used<sup>81</sup>.

As analysed above, if the e-procurement is promoted and used, some costs related to procurement procedures would be useless and consequently the staff would be reduced.

#### **E. Gaining competitive advantage**

Increased profitability of a company will result in an advantage being gained over its competitors. One way of achieving this is by centralising functions such as payroll, procurement and logistics in a single country<sup>82</sup> as electronic systems of procurement do not have geographical and time barriers. Kalakota cited in Robert E. et al. <sup>83</sup>states that adoption of e-procurement “allows procurement activities 24 hours a day, 7 days a week, 365 days a year”. As a centralised department can oversee all procurement activities and different offices worldwide can access the same documentation when required, this gives a distinct advantage over the much slower process of having to post documentation between offices.

Competition is one of the Rwandan fundamental principles of procurement. To achieve this principle, e-procurement is very important because it does not have borders, it is worldwide; it does not have the limit in time, it is working 24 hours. Consequently, e-procurement increases productivity and makes greater market access.

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<sup>80</sup> Robert E. et Al., drivers and barriers to public sector e-procurement within northern Ireland's construction industry, 2007 available at [www.itcon.org](http://www.itcon.org)

<sup>81</sup> Egbu C. cited in Robert E. et Al., drivers and barriers to public sector e-procurement within northern Ireland's construction industry, 2007 available at [www.itcon.org](http://www.itcon.org)

<sup>82</sup> Ibidem.

<sup>83</sup> Kalakota, R., Tapscott D. and Robinson M. cited in Robert E. et Al., *op. cit.*, p??

## F. Improving communication

Hawking et al. cited in Robert E. et Al. examined three separate benefits of e-procurement, namely: “improving visibility in supply chain management”, “improving visibility in customer demand” and “increased compliance”<sup>84</sup>. Rankin quoted by Robert E. et Al. <sup>85</sup> also identifies data transaction accuracy as a driver. These are all associated with “improving Communication”. Since e-procurement allows sections of electronic documentation to flow through the supply chain; it improves the speed of returns and subcontractor price visibility. As it is easier to communicate requirements in a quicker more accessible manner, it will result in a better understanding of requirements and due compliance. It also allows clients to gauge the state of the market by seeing how much interest is shown in the tender. For the purposes of this study these three benefits have been combined and considered under the broad category of improving communication<sup>86</sup>.

Article 29 of the Rwandan procurement law as stated above, provides that before the expiry of the bid validity period, the procuring entity shall at the same time notify the successful and the unsuccessful bidders of the provisional outcome of the bid evaluation. The notification shall specify that the major elements of the procurement process would be made available to bidders upon request and they have seven (7) days to lodge a complaint, if any, before a contract is signed with the successful bidder. Undoubtedly, all bidders cannot receive at the same time their notifications so as to be the base of counting those seven days for any complaint. Seven days are counted from the day the last bidder has received the notification letter. E-procurement might be the answer to that problem because when an E-mail is written to the concerned bidders, this is when to count seven days provided by the law.

It is worth to note that the benefits of e-procurement are not limited to the step of procurement processes but also to the contract management. When the contract of the tender is signed, other stages related to e-procurement continue. The following item focuses on benefits of e-invoicing.

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<sup>84</sup> Hawking P., Stein A. quoted by Robert E. et Al., *op. cit.*

<sup>85</sup> Rankin J., Chen Y. and Christian A., *op. cit.*, p. 79

<sup>86</sup> Robert E. et Al., *op. cit.*, p.??

## §2. Benefits of E-Invoicing on public procurement

E-procurement is not only used in chain supply management but also in e-invoicing and e-payment. After the supply, the bidder submits the invoice and thereafter he is paid the price of the contract.

E-invoicing offers many benefits: significant cost reduction, process simplification, reduced payment time, greater security of data, as well as numerous environmental benefits. This is confirmed by enterprises and public authorities which already use it. Benston and Smith quoted by D. Chesire Barngetuny & G. Kimutai. introduce transaction costs. They attempt to explain why individual corporations do not perform asset transformation themselves as a function of the transaction costs incurred in conducting such activities. As shown in transaction cost economics, the cost of the infrastructure is reduced per transaction when the volume of transactions increases. To create a financially viable e-invoicing solution, corporate needs to create this critical mass by a value network of alliance partners and technology solution providers to add the necessary desirability for electronic invoicing through the Financial Supply Chain<sup>87</sup>.

Value and costs depend on the number of access points, nodes or users that can be reached, and the variety of links between users. The costs for the users are in terms of charges for access to and use of the network, while the value is determined by the possibility to reach a large and relevant number of nodes through a variety of links. To provide greater value, value networks can increase their range of services offered by layering new services on top of the contract set and the infrastructure, or increasing access to a larger pool of users<sup>88</sup>.

The e-invoicing is not used in Rwanda; all bidders who present their invoices to procuring entity, they do it manually. Manual invoicing, takes much time from the central secretariat up to the Chief Budget Manager for approval. When the invoice is approved, it starts again the way for payment from the accountant to the Chief Budget Manager. The bureaucracy discussed above continues to present even in invoicing while it is the important time for bidders to be paid.

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<sup>87</sup> Benston, G.J. and Smith, Jr., C.W. cited in Chesire Barngetuny & G. Kimutai., Effects of e-procurement on supply chain management performance in ELGEYO-Marakwet country, International Journal of Research in Business Management, Jomo Kenyatta University of Agriculture and Technology, 2015, file:///C:/Users/Administrator-PC/Downloads/2-78-1447506680-4.man-EFFECTS%20OF%20E-PROCUREMENT%20ON%20SUPPLY%20-Peter%20Kiprotich.pdf

<sup>88</sup> Chesire Barngetuny & G. Kimutai., op. cit., p. 40



Electronic financial supply chain players need to streamline the settlement process in terms of both workflow and transaction cost by creating e-marketplaces with standardized settlement mechanisms via a finite number of trusted providers with both the range of necessary solutions and the openness and reach to enable transactions throughout the e-marketplace. Buenger et al. quoted by D. Chesire Barngetuny & G. Kimutai provide a framework of competing value drivers, indicating that organizations face different value propositions, which may change over time due to internal and external influences and experiences<sup>89</sup>.

### **§3. Benefits of E-Payment on public procurement**

E-payment is the fastest growth area in the global economy and almost carries potentials beyond measure. It provides consumers with the benefits of any time, any where transactions, with lower costs. Moreover it shortens the distance between the buyer and the seller and shrinks the world into a small village<sup>90</sup>. The uptake of e-payment is influenced by its potential to create business value and by awareness of its participants of the potential benefits<sup>91</sup>. A major reason for most companies, irrespective of size, to participate in business is to extract some benefit from it.

Some suggest that there could be more than ten e-payment benefits for both buyer and seller. These are cost savings and speed in selling and purchasing, exposure to new customers (global reach), convenience and transparency to users, better quality of product/service, reduce need for office space and fewer resources required. The development of information technology and computer networks enhanced the usage of e-payment and improved the use of supply chain management. SCM focuses on the integrated planning, co-ordination and control of all logistical business processes and activities in the supply chain to deliver superior consumer value at less cost to the chain as a whole, whilst satisfying requirements of other stakeholders, such as consumer interest organizations and government<sup>92</sup>.

In Rwanda, many bidders use loans in executing tenders; the banks give them timeframe to pay loans because they are doing business and default to pay on time, penalty related to delays as

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<sup>89</sup> Buenger, V. et al., *Competing values in organizations: Contextual influences and structural consequences*, *Organization Science*, 1996, p. 560.

<sup>90</sup> <sup>90</sup> Buenger, V. et al., cited in DAVID C. B. and GEOFFREY K., *op. cit.*, p??

<sup>91</sup> Salnoske, K. cited in DAVID C. B. and GEOFFREY K., *op. cit.*, p??

<sup>92</sup> *Idem*, p. 12

applied. Some bidders claim that some procuring entities delay to pay the price of the tender and consequently, they face the challenge of respecting the terms of conditions related to loans of the banks due to delay of payment. E-payment may be the solution of these challenges.

Some authors consider that the complete implementation of the SCM concept should result in fully integrated much more effective supply chains with full information transparency and optimal allocation of value-adding processes<sup>93</sup>. All transactions are done in a specific virtual place called Business-to-Business electronic marketplaces. E-marketplaces are one of the most heralded developments in recent years. These marketplaces bring together businesses buying and selling goods and services in an online buying community. E-marketplaces propose to increase the efficiency and effectiveness of procurement activities by replacing traditional manual processes with automated electronic procedures and by expanding the number of available trading partners.

With these reasons given in support of the adoption of E-procurement, it is relevant to recommend the regulation of E-procurement. It is good that all stages of e-procurement should be done electronically from the advertisement of the tender to the payment of the tender. The reference can be taken from the legal systems of European Communities in as far as E-procurement is concerned.

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<sup>93</sup> Knudsen D. cited in DAVID C. B. and GEOFFREY K., *op. cit.*

## **CHAPTER 3. PROPOSED LEGAL REGIME OF E-PUBLIC PROCUREMENT**

The legislation of e-public procurement is very important to its successful implementation and for people to enjoy its benefits. However, there are some challenges to e-public procurement that have to be tackled such as IT infrastructure, knowledge on internet and etc.

This chapter puts emphasis on two main points. The first section deals with the legal regime of e-public procurement as one of the efficient measures to use it. The second section concerns the other challenges on e-public procurement to be redressed.

### **Section one. Legal regime of e-procurement**

The legislation of e-procurement can have many benefits. The benefits of electronic procurement can be significant, including improvements in the transparency, accuracy and efficiency of the process, as well as promoting greater competition in the marketplace through the broader reach provided by the internet. For works procurement in particular, contract management can be a complex activity involving the assessment of project completion and the certification of staged payments to contractors. Electronic procurement if regulated can support the whole procurement process from tender document preparation through to tender award, linking buyers and suppliers using internet technologies<sup>94</sup>. In this section, we propose to examine the regulation of e-public procurement and its steps in the procurement process.

#### **§1. Legal framework on e-procurement**

The regulation of e-public procurement and all its steps is necessary for its use. Not only the regulation of e-procurement is needed but also the details and all steps accompanying it should

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<sup>94</sup> PricewaterhouseCoopers, "Strategy for the Implementation of e-Procurement in the Irish Public Sector", 2001, p. 51.

be emphasized. This is very important because as discussed in the chapter one, the definition of e-public procurement is different from one country to another country.

According to J. Barcelo citing R. Eadie et al. as regards the state of e-procurement regulation in the European Union,<sup>95</sup> the legal difficulty is one of the main barriers to e-procurement. One of the difficulties highlighted by J. Barcelo was the lack of specific legal regulation.

Article 13 of the Rwandan public procurement law provides that whenever available, Information Communication Technology (ICT) shall be used in public Procurement in matters related to publication of the general procurement notices, advertisement of the procurement opportunities, publication of a summary of the evaluation results, requesting for information on the tender process and dissemination of laws and regulations related to public procurement, e-public procurement and its steps are not regulated.

Important stages of the procurement process have been analysed in Chapter one. In this part of the study, the highlights will be on the regulation of e-advertisement, e-bidding, e-evaluation, e-notification, e-contract management and e-payment.

### **A. E-Advertisement**

In the procurement process, electronic means have been, so far, one of the ways provided by EU directives to give economic operators information of an award procedure<sup>96</sup> within the European Union. The EU 2014/24 Directive, in some cases, limited the right of contracting authorities to choose the means of communication and imposed the electronic one<sup>97</sup>.

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<sup>95</sup> Julia-Barcelo R. cited in Robert Eadie et al., *Drivers and barriers to public sector e-procurement within northern Ireland's construction industry*, 2006, p. 110.

<sup>96</sup> Directive 2004/18/EC, art. 42, where it is also specified that "the means of communication chosen must be generally available and thus not restrict economic operators' access to the tendering procedure"

<sup>97</sup> Electronic means of information and communication can greatly simplify the publication of contracts and increase the efficiency and transparency of procurement processes. They should become the standard means of communication and information exchange in procurement procedures, as they greatly enhance the possibilities of economic operators to participate in procurement procedures across the internal market. For that purpose, transmission of notices in electronic form, electronic availability of the procurement documents and – after a transition period of 30 months – fully electronic communication, meaning communication by electronic means at all stages of the procedure, including the transmission of requests for participation and, in particular, the

Tender documents can be either made available or sent to economic operators by electronic means<sup>98</sup>. Electronic means can be used to send and receive tenders and requests to participate, as well as plans and projects in design contests.

It is reported that all types of notices are published by the Publications Office of the EU. TED (Tenders Electronic Daily) is the online version of the Supplement to the Official Journal of the EU dedicated to European public procurement. All information on public procurement contracts, according to the EU rules on public procurements, of notices published in EU Member States, European Economic Area (EEA) and beyond can be found in this website<sup>99</sup>. Every day, from Tuesday to Saturday, a further 1,700 public procurement notices are published on TED. Everyone can browse, search and sort procurement notices by country, region, business sector and more. Information about every procurement document is published in the 24 official EU languages. All notices from the EU's institutions are published in full in these languages<sup>100</sup>.

Another example is Australia where, NSW e-Tendering is used. NSW e-Tendering is a web-based tender management system. It delivers a standard single entry point for government organisations to advertise NSW Government business opportunities. Agencies may choose to allow electronic copies of the tender documentation to be available for downloading from the NSW e-Tendering website, receiving electronic tender responses, and disclose contract award details. The system also allows suppliers to register through the NSW e-Tendering website and request notification by email of tender opportunities that are within their range of interest<sup>101</sup>.

As it is used by EU and Australia, Rwanda should create a website to be used by all government and public institutions for advertisement of any tenders. The website should also be managed by

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transmission of the tenders (electronic submission) should be made mandatory. Member States and contracting authorities should remain free to go further if they so wish. It should also be clarified that mandatory use of electronic means of communications pursuant to this Directive should not, however, oblige contracting authorities to carry out electronic processing of tenders, nor should it mandate electronic evaluation or automatic processing. Furthermore, pursuant to this Directive, no elements of the public procurement process after the award of the contract should be covered by the obligation to use electronic means of communication, nor should internal communication within the contracting authority.

<sup>98</sup> F. LICHÈRE cited in Robert Eadie et al., *op. cit.*, p. 20.

<sup>99</sup> Available at <https://open-data.europa.eu/en/data/dataset/ted-1>, accessed on 12/4/2016

<sup>100</sup> *Ibidem*

<sup>101</sup> Electronic Tender Advertising and Disclosure Information, available at <https://tenders.nsw.gov.au/> accessed on 29/3/2016

the RPPA as the public organ with the mandate of among others of ensuring organization, analysis and supervision in public procurement matters and controlling activities of awarding public contracts and their execution<sup>102</sup>.

## **B. E-bidding**

As G.M. Racca points out, most concerns encountered in the submission of tenders relate to the authentication through means such as electronic signatures and recognition of electronic identification. Such issues are not specific to the e-Procurement context but arise in any situation where authentication/signatures are required. The EU Commission has adopted measures to allow authorities to identify the origin/certification of partner countries signatures. The PEPPOL project developed solutions to provide on-line tools permitting automatic recognition of electronic signatures from other Member States to be used in a procurement context<sup>103</sup>.

The OpenPEPPOL Association is responsible for the governance and maintenance of the PEPPOL specifications that enable European businesses to easily deal electronically with any European public sector buyer in their procurement processes. The purpose of PEPPOL is to enable European businesses to easily deal electronically with any European public sector buyers in their procurement processes, thereby increasing opportunities for greater competition for government contracts and providing better value for tax payers' money<sup>104</sup>. This is recommendable because the bid document is composed by different documents; some of them are of the bidders but others are from the partners of the bidders such as bid security guarantee, tax clearance, Rwanda Social Security Board clearance for all obligations, trading license and so on, to recognize them are for much importance and prevent forging.

Other concerns arise from the requirement for contracting authorities to assess documents submitted by tenderers to prove eligibility for selection. These documents are issued at national level in accordance with the relevant conventions, formats and languages<sup>105</sup>.

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<sup>102</sup> RPPA, mandate of RPPA available at <http://www.rppa.gov.rw/index.php?id=13>

<sup>103</sup> Racca, G. M., *"the electronic award and execution of public procurement"*, Ius Publicum, p. 28

<sup>104</sup> Available at [http://www.peppol.eu/about\\_peppol/about-openpeppol-1](http://www.peppol.eu/about_peppol/about-openpeppol-1), accessed on 12/4/2016

<sup>105</sup> ibidem

E-procurement is expected to find ways to increase efficiency and reduce the repeated burden on economic operators.

In some countries, economic operators provide a statement (often a simple electronic document which may or may not be electronically signed) in which they maintain that they are not in breach of any of the set criteria. Only the winning bidders are asked to provide the actual documents and this may be done electronically or on paper<sup>106</sup>.

The documents submitted online need the electronic signatures so as the bidder are being accountable. Article 25 of the regulation (EU) n° 910/2014 of the European parliament and of the council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC provides that an electronic signature shall not be denied legal effect and admissibility as evidence in legal proceedings solely on the grounds that it is in an electronic form or that it does not meet the requirements for qualified electronic signatures. A qualified electronic signature shall have the equivalent legal effect of a handwritten signature. A qualified electronic signature based on a qualified certificate issued in one Member State shall be recognised as a qualified electronic signature in all other Member States.

In 2010, 18 countries expressly require the use of electronic signatures in e-procurement procedures, while 13 countries do not explicitly require them. In terms of the type of signature required, 13 out of the 27 Member States have introduced a legal requirement specifying the use of advanced e-Signatures. The regulatory choices of Member States in regard to e-Signatures may indicate their preferences in relation to security and trust but also need to be considered from a cross-border and inter operability perspective<sup>107</sup>.

The Law n° 18/2010 of 12/05/2010 relating to electronic messages, electronic signatures and electronic transactions was enacted to resolve such problems. The law defines the electronic signature as data in electronic form, affixed to or logically associated with, an electronic

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<sup>106</sup>Racca, G. M., *op. cit.*, p. 29.

<sup>107</sup> Commission (EC) 'Evaluation of the 2004 Action Plan for Electronic Public Procurement Accompanying document to the Green Paper on expanding the use of e-Procurement in the EU cited in Racca, G. M., *op. cit.*, p. 28.

message, which may be used to identify the signatory in relation to the electronic message or to approve the information contained in the electronic message. Article 20 of the abovementioned law<sup>108</sup> provides that in any legal proceedings, an electronic signature shall be accepted and valued as evidence without considering the fact that it is in electronic form and not based upon a security procedure or certificate prescribed pursuant to this Law. Paragraph two of this article provides that where the law requires a signature of a person, that requirement is met on an electronic message if the method used allows to identify the originator and that the originator approves the contents of the message and if that method is reliable and is the one that was provided for to generate and communicate the electronic message was in accordance with any relevant agreement. This shows that electronic message and signature are regulated and if used are recognized by the law.

In Netherlands, TenderNed is used for all procurement process even e-bidding. In Australia there is NSW e-Tendering as well. This shows that if a website is created in Rwanda for all public procurement stages, this may help to ensure a smooth and transparent e-procurement. To submit the tender electronically, the bidder prepares his tender and then sends it to the e-tendering platform (a website created). The submission date of the tender checked against the deadline defined in the advertisement. That e-tendering platform should store all submitted tenders and a reception response to acknowledge receipt of the submitted tender should be sent to the bidder.

### **C. E-evaluation**

G.M. RACCA citing R.A. BUTLER considers that one of the main obstacles in participating in public procurement consists in administrative burdens deriving from the need to produce a substantial number of attestations, certificates or other documents evidencing the tenderer's suitability. Some Member States of European Union have already endorsed pre-qualification services to avoid repeating the evaluation of the participation requirements. For instance, in the

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<sup>108</sup> The Law N° 18/2010 of 12/05/2010 relating to electronic messages, electronic signatures and electronic transactions, *OGRR*, n° 20 of 17/05/2010



U.K. certain public-private partnerships have created specific websites with regard to the management of prequalification requirements<sup>109</sup>.

As one of the solutions of the management of prequalification requirements, EU has created e-Certis. E-Certis helps to identify the different certificates and attestations frequently requested in procurement procedures across the 28 Member States, one Candidate Country (Turkey) and the three EEA countries (Iceland, Liechtenstein and Norway). If a European company wishing to submit a proposal in response to a foreign call for tenders, or if a contracting authority that has to evaluate a foreign tender, e-Certis can help to understand what information is being requested or provided. Secondly, it can help to identify partner country documents that match certificates and attestations that are required locally<sup>110</sup>.

Article of 39 paragraph 3 of the law n° 12/2007 of 29/03/2007 on Public Procurement as modified and complemented provides that the successful bidder shall be the lowest responsible bidder. When the lowest price is the award criterion, contracting authorities will not refer to any other qualitative element in the award of the contract. The lowest price is the sole quantitative benchmark that can differentiate the offers submitted by the tenderers<sup>111</sup>. When there is a standard of the service/product/work requested, the lowest price will be responsive to the tender. The simple example is related to the transport service. If the procuring entity needs the service of the transport of third category (the standard of transport set by MININFRA), the bidder who will provide the lowest price will be the successful bidder of the tender. The standardization of the product/service may help to the e-evaluation because the requirements are easy to assess.

Sometimes, the problem is when the evaluation is first based on the quality. Racca, G.M. has considered that through an intense and detailed preliminary work, it is possible to define the exact quality standard required and consider the possible different options submitted by the tenders irrelevant; in such cases, the precise previous definition of the quality required enables to receive and evaluate on a price basis only offers than assure all such level of quality. Such

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<sup>109</sup> LUKE R.A. BUTLER cited in Racca, G. M., *op. cit.*, p. 31.

<sup>110</sup> Available at <http://ec.europa.eu/markt/ecertis/login.do>, accessed on 13/4/2016

<sup>111</sup> Case C-247/02, Sintesi S.p.A. v Autorità per la Vigilanza sui Lavori Pubblici, 2004 cited in Racca, G. M., *op. cit.*, p. 35,

previous work can open a wider room for the adoption of the criterion of the lower price without sacrificing quality and facilitates the use of electronic evaluation. Obviously, if there are no preferences concerning the different quality variants of the same good, service or work, the economic operators in the relevant market will offer the most cost-effective solution of the contract request. However, contracting authorities can reject a tender if the price is considered abnormally low<sup>112</sup>.

The contracting authority should analyze and define its needs and therefore specify the subject-matter of the contract performance. Significant professional skills are required to properly pinpoint such needs and the quality level required. Otherwise, an improper definition of the needs and of the quality standards required will lead to an unsatisfactory award<sup>113</sup>.

Article 34 paragraph 3 of the law n°05/2013 of 13/02/2013 modifying and completing the Law n°12/2007 of 27/03/2007 on Public Procurement provides that the procurement contract shall be awarded to the bidder that submitted the lowest priced quotation for the described quality that also meets the delivery period of the procuring entity. This article and doctrines highlighted above, show that the price is not the only criteria of the selection but also the quality is important when the technical specifications are well designed.

In the report produced by the European Commission on the evaluation of Directive 2004/18 on electronic public procurement, it was suggested a successful e-Evaluation can be supported by e-procurement systems offering a computer-assisted tool for:

- Contracting Authorities to set evaluation criteria using an electronic form, that will be published as part of the tendering specifications;
- Tenderers to supply information that automatically fills the form with performance data;
- Evaluation panel members to assess individual tenders and award the contract to the winning tenderer based on the award criteria established in the TOR<sup>114</sup>.

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<sup>112</sup> Racca, G. M., *op. cit.*, p. 35

<sup>113</sup> Racca, G. M., *op. cit.*, p. 36

<sup>114</sup> European Commission, Evaluation of the 2004 action plan for electronic public procurement, Brussels, 2010, p. 116

Commonly, tools handle the following evaluation criteria (identified in the TOR) according to the European and national law: best price, price and technical evaluation (most economically advantageous tender), price and a final auction<sup>115</sup>.

The European Commission states that best price evaluation can be conducted by the system in a totally automated fashion. The price is encoded in each tender and the role of the contracting authority's evaluation panel is just to verify that tenderers effectively commit to supplying products/services requested in full compliance with the TOR (basically this boils down to completeness of the tender). The system then automatically ranks the tenders by price resulting in the choice of the best bid<sup>116</sup>.

The electronic evaluation of the tender in e-procurement can be used in all methods of procurement provided that all criteria are set in database and also it is needed the website managed by the organization for helping to identify the different certificates and attestations.

#### **D. E-notification**

The pre-award phase of procurement is ended up by notification of the results of the evaluation to all bidders. Article 29 of the abovementioned Rwandan procurement law of 2013 provides that before the expiry of the bid validity period, the procuring entity shall at the same time notify the successful and the unsuccessful bidders of the provisional outcome of the bid evaluation. The notification shall specify that the major elements of the procurement process would be made available to bidders upon request and they have seven (7) days to lodge a complaint, if any, before a contract is signed with the successful bidder. Traditional public procurement causes the problem of knowing when to start counting 7 days while all bidders do not receive the notification letters at the same day. Some bidders refuse to get their letters while others get them late.

E-notification is the solution of that problem. All bidders should be requested to provide electronic means of communication so as to use by the procuring entity for notifications. By

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<sup>115</sup> ibidem

<sup>116</sup> European Commission, Evaluation of the 2004 action plan for electronic public procurement, Brussels, 2010, p.

using e-notification, seven (7) days are counted from the day of sending the notification to e-mail of bidders because it is supposed that all bidders have received the results of the evaluation.

### **E. E-contract management**

Manju Pillai and Pramila Adavi assert that today technology has advanced to such an extent that it has eradicated conventional techniques and has replaced it with efficient and time saving mechanisms. Electronic contract management is a result of such technical advances that the execution process has adopted. As a part of these changes the execution process of the contract is enhanced with the help of modern electronic systems to enable strong partners/stakeholders relationship. Contract management is an important factor which directly affects the following factors of the execution of the contract such as scope, quality, time, cost and resource<sup>117</sup>.

For the European Commission, e-contract management is the function that enables the Contracting Authority to keep track of the supply or the provision of services. The Contracting Authority monitors contract performance and records all deliverables that are received as part of the contract. Formal approval statements from designated reviewers are recorded<sup>118</sup>.

If E-contract management is enacted, this may help to prevent fraud, theft, corruption, other unethical activities, communication gap and delayed financial decisions. The consequences of those challenges resulted by the manual intervention in managing contracts are the delayed contract execution and the bad quality of the contract.

Electronic Contract Management is the solution to overcome most of the challenges of manual method and to gain maximum benefits from contract management process.

### **F. E-payment**

E-payment is a subset of an e-commerce transaction to include electronic payment for buying and selling goods or services offered through the Internet. Generally, one thinks of electronic

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<sup>117</sup> Manju Pillai and Pramila Adavi, *Electronic Contract Management*, Maharashtra Institute of Technology, India, 2013, p. 3.

<sup>118</sup>European Commission, *op. cit.*, p. 118

payments as referring to online transactions on the internet; there are actually many forms of electronic payments. As technology developing, the range of devices and processes to transact electronically continues to increase while the percentage of cash and check transactions continues to decrease. In the US, for example, checks have declined from 85% of non-cash payments in 1979 to 59% in 2002, and electronic payments have grown to 41%<sup>119</sup>.

Rwanda uses a partial e-payment because MINECOFIN has created software used by all government and public institutions for all payments from the Government Budget. However, even if all information is written in that software, hard copies should accompany that information. Even that, a check and payment order should be signed. E-payment is the solution to those traditional practices.

As shown above, e-payment may prevent fraud, theft, corruption, and other unethical activities and promote principles of public procurement such as transparency, accountability and fairness.

The section above highlighted the content of e-procurement and need to regulate it. The regulation of e-procurement without taking into consideration of other surrounding realities may hamper its objectives. The following part will highlight other challenges on e-public procurement to be redressed.

## **Section 2. Other challenges noted on E-public procurement to be redressed**

The legal consideration of electronic procurement is important but without other considerations, this may be in vain. Despite the proven benefits of using electronic means in procurement, there are still barriers to the implementation of e-procurement to be redressed such as IT infrastructure, capacity building on e-procurement, company culture, security of transactions and lack of system standards. Some companies may not have sufficient facilities to embark on an e-procurement system or to use electronic tools. They may also be resistant in hiring personnel and a lack of trained employees.

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<sup>119</sup> X., *what is e-payment?*, available at <http://www1.american.edu/initeb/sm4801a/epayment1.htm> , accessed on 5/4/2016

## §1. IT infrastructures

The World Bank in its draft strategy on Electronic Government Procurement (e-GP), revealed the problem of infrastructure that an appropriate infrastructure is required which connects the government procurement agencies and suppliers. Governments may invest in connectivity as otherwise e-GP will not open markets but restrict them to a group of privileged suppliers with web access. To this end, e-GP can contribute to increasing the digital gap rather than closing it. If infrastructure constraints bore the risk of excluding potential suppliers from participation, governments should offer the dual procurement option meaning suppliers to select between the e-GP and the traditional paper-based process<sup>120</sup>.

IT infrastructure refers to the composite hardware, software, network resources and services required for the existence, operation and management of an enterprise IT environment. It allows an organization to deliver IT solutions and services to its employees, partners and/or customers and is usually internal to an organization and deployed within owned facilities<sup>121</sup>. IT infrastructure is very important to a successful e-procurement process.

Sometimes, IT infrastructure is not enough and everywhere to support electronic use and also even if it is there, the problem becomes the cost which is very expensive.

Rwanda has put in place a national fiber optic network to connect to international sea cables. The network has enhanced accessibility to internet across the country because all districts offices have fiber optic infrastructure and network. A national data centre which allows Rwanda to centralize her information storage, management and protection, as well as take advantage of cloud computing opportunities has been set up. Even if Rwanda has done a lot in providing network infrastructure but the problem of network in the whole country is still there.

For better functioning and success, it is good to call upon all partners in IT to facilitate e-procurement.

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<sup>120</sup> World Bank, Electronic Government Procurement (e-GP), Draft strategy, Washington DC, 2003, p. 13

<sup>121</sup> X., IT infrastructure, available at <https://www.techopedia.com/definition/29199/it-infrastructure> , accessed on 5/4/2016.

## **§2. Company culture**

According to Carayannis et al. traditional public procurement faces many deficiencies. They enumerated these as complicated procedures and extended relationships, excessive state intervention, bureaucratic dysfunctionalities, absence of a clear national IT policy, large volume of paper, lack of flexible centralized control, lack of information quality and resistance to change. With the exception of a reduction in paper in public procurement each of the above remain as barriers to implementation of a system of e-procurement<sup>122</sup>. It is pointed out that “resistance to change” is one of the biggest barriers to the introduction of e-procurement within the public sector. Resistance to change, lack of a widely accepted solution and lack of leadership, which are cultural issues, are highlighted as barriers by Davila et al in the USA<sup>123</sup>. This shows that the mindset change to the new practice and policy is a problem to human kind.

Many public institutions have initiated different software in their different activities but information received from some officers from these institutions show that the latter do not use them accordingly. To shift from traditional procurement to e-procurement, some may have resistance to change attitude due to technology. Bidders, procurement officers, logistics officers and chief budget officers are keys persons in Rwanda for the implementation of e-public procurement. It is recommended that in the regulation of e-public procurement, serious sanctions may be provided to those who do not want to change attitude in using e-public procurement.

## **§3. Capacity building on e-procurement knowledge**

As discussed in the part of company culture, another issue is related to the knowledge of the people to implement e-procurement. Even if by nature a human being resists to a change, but it is also undeniable that training in IT needs is also needed.

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<sup>122</sup> Carayannis et al (2005), cited in Robert Eadie et al., *op.cit.*, p. 111.

<sup>123</sup> Davila et al (2003), cited in Robert Eadie et al., *op.cit.*, p. 111.

In Rwanda, people are familiar with ICT. However, we cannot forget that some of them do not know how to use ICT. The skilled personnel in all levels are of much importance. Therefore, the habitual capacity building is necessary to all partners of e-procurement such as the personnel in charge of public procurement in government and public institutions and also to bidders.

#### **§4. Security of transactions**

E-Procurement is on the rise and it is said to be one of the most efficient ways to conduct business. This is evidenced by studies showing that organizations are spending as much as 50 to 60% of total revenue on e-procurement activities. E-Procurement is generating great excitement because of its potential to reduce procurement costs and improve strategic sourcing<sup>124</sup>.

Even if the importance of using e-procurement has been shown, the security and confidentiality of data exchanged in electronic environments is still a big problem.

As competition on the internet grows, companies seek to obtain as much information as possible from competitors (i.e. knowledge about competitors, prices, products, customers) by using various methods that threaten data security and help them gain an unfair advantage<sup>125</sup>. This is possible because all bidders do not submit their bids at the same time. There is a timeframe of bidding; so interested bidders may use a technology and enter in the system to know about competitors bids.

In the line of security of transactions, the cyber security is very important. Cyber security is at the core of a knowledge-based society and as such must be a national priority. It ensures secure management of all deployed ICT assets that support all facets of Rwanda's ICT goals. To fully realize ICT benefits, there must be full confidence that information and communication systems are secure and dependable. The Internet exposes Rwandans to global networks, which are prone to advanced and repeated cyber-attacks<sup>126</sup>.

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<sup>124</sup> Subramaniam, C., & Shaw, M. J., A study of the value and impact of B2B e-commerce: the case of web-based procurement. *International Journal of Electronic Commerce*, 2002. P. 19-40.

<sup>125</sup> Juliette, S., & Raul, V., Security of E-Procurement Transactions in Supply Chain Reengineering, Canadian Center of Science and Education, 2013, p.1

<sup>126</sup> MYICT, National ICT Strategy and Plan, NICI 2015, p. 25



The scope of cyber security is three fold. First is to increase the level of cyber security awareness and protect key ICT assets against attacks. Second is to build local capabilities to respond to attacks as well as foster international cooperation on cyber security. Third is to create a legal and regulatory environment to mitigate cyber vulnerabilities<sup>127</sup>.

Therefore, it is good for Rwanda to launch e-procurement while taking strategies of ensuring security of transaction data. The country also must continue investing in IT and information security to ensure the protection and integrity of national information and ICT assets.

### **§5. Lack of system standards**

Even though e-procurement offers a way to cut costs and improve efficiency when procuring products, the lack of standards may be a problem, especially when the ordering system is integrated with other corporate programs, or for the accessibility of the electronic catalog. When implementing an e-procurement system, most companies are concerned with having a standardized system, accuracy of data transfer, data consistency, cost, Internet security, and certification. For example, XML was used to obviate the need to reconfigure proprietary ordering systems when changing suppliers<sup>128</sup>.

It may happen where product specifications do not have standard; when for example putting bids online, some suppliers may complain about misleading product specifications and may be concerned about their ability to realize a profit. The Rwanda public procurement authority should set a standard of all documents needed in the procurement process and even of some products.

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<sup>127</sup> *Ibidem*.

<sup>128</sup> Rohm, A., Kashyap, V., Brashear, T. cited in Behnam Bahreman, *Investigating Benefits and Limitations of applying e-procurement in B2B Automakers companies in Iran*, Lulea University of Technology, Master Thesis, 2010, p. 43

## CONCLUSION

Public procurement in the satisfaction of the needs of the government and public institutions is very important for the achievement of their objectives. As it is regularly reported by MINECOFIN and the office of the Auditor General of Rwanda, most of the budget of the country is used in the procurement of goods, services and works for various arms of the government. If public procurement is done in the proper manner, without any hesitation, the objectives might be achieved and the development of the country as well.

This study has highlighted some challenges met by traditional public procurement such as bureaucracy, increment of administrative costs, doubtful of transparency and bad quality of products and service acquired. Those challenges may cause fraud, theft, corruption, other unethical activities and communication gap.

The fundamental principles of the Rwandan public procurement are transparency, competition, economy, efficiency, fairness and accountability. To achieve those principles, it is important to take serious measures and to implement them accordingly. One of the measures is to use e-procurement in the acquisition of goods, services and works.

Electronic procurement is the use of Information & Communications Technology (especially the Internet) by governments in conducting their procurement relationships with suppliers for the acquisition of goods, works, and consultancy services. E-public procurement technology reduces physical barriers of space and time, allows faster information flow and wider access to information and services. It offers benefits such as reducing the opportunities for corruption and providing public access to information related to the different stages of the procurement process; greater efficiency in the procurement process and better use of the government resources; significant savings in government and public institutions purchases due to greater competition between suppliers, better comparison of prices and reductions in transactions costs; and higher

level of integration and development of economies while stimulating the competitiveness and productivity of small and medium sized companies through greater access to national and international markets.

E-procurement systems are increasingly being used worldwide by many countries as a key element of public sector reform. Some of these countries are Netherlands, Australia and many other members of European Union. The guidelines which may help to know better e-procurement are the EU 2014/24 Directive on procurement and the EU 2014/25 Directive on procurement by entities operating in the water, energy, transport and postal services sectors.

It is recommended that Rwanda should adopt e-public procurement because it will help to promote the fundamental principles of public procurement. This means that it will ensure a well functioning internal market when public procurement is conducted electronically, achieve greater efficiency in procurement and improve governance and work towards an international framework for electronic public procurement. It is also important to think of redressing other challenges discussed in this research such as IT infrastructure, capacity building on e-procurement knowledge, security of transactions, etc. RPPA should be the public institution responsible to create and manage a website dedicated to public procurement. All government and public institutions should also use that website in all public procurement processes.

Finally, we are convinced that this study has succeeded in showing that the adoption of e-public procurement and the application of basic public procurement principles to e-procurement processes can definitely improve the way various government departments and institution acquire goods, services and works.

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